U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Niagara Falls Boulevard Radiological Site - Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region II

Subject: **POLREP #18**
Niagara Falls Boulevard Site Removal Action
Niagara Falls Boulevard Radiological Site
A23Q
Niagara Falls, NY
Latitude: 43.0965960 Longitude: -78.9520670

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From: Peter Lisichenko, On-Scene Coordinator
Date: 2/8/2019
Reporting Period: October 13, 2018 through February 8, 2019

1. Introduction

1.1 Background

Site Number:	A23Q	**Contract Number:**	
D.O. Number:		**Action Memo Date:**	9/27/2016
Response Authority:	CERCLA	**Response Type:**	Time-Critical
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	6/1/2016	**Start Date:**	6/1/2016
Demob Date:		**Completion Date:**	
CERCLIS ID:	NYN000206699	**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category
Removal Assessment and Removal Action

1.1.2 Site Description
The 9540 Niagara Falls Boulevard Site (CERCLIS ID NYN000206699), hereinafter referred to as “the NFB Site” or “the Site”, is located in a mixed commercial and residential area of Niagara Falls, New York. The site consists of two parcels, namely 9524 and 9540 Niagara Falls Boulevard. This site encompasses approximately 2.53 acres. Currently, the 9524 Niagara Falls Boulevard property contains a bowling alley and an asphalt parking lot; the 9540 Niagara Falls Boulevard property contains a vacant building and an asphalt parking lot. Both businesses are currently active. The properties are bordered to the north by a wooded area; to the east by a church; to the south by Niagara Falls Boulevard, beyond which is a residential area; and to the west by a hotel and residential area.

In 1978, the U.S. Department of Energy conducted an aerial radiological survey of the Niagara Falls region and found more than 15 properties having elevated levels of radiation above background levels. It is believed that, in the early 1960s, slag from local industrial operations was used as fill on the properties prior to paving. Based on the original survey and subsequent investigations, it is believed that the radioactive Union Carbide slag was deposited on the NFB Site.

1.1.2.1 Location
9524-9540 Niagara Falls Boulevard, Niagara Falls, NY

1.1.2.2 Description of Threat
Radioactive contamination

565015

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

In September/October 2006 and May 2007, New York State Department of Environmental Conservation (NYSDEC) conducted radiological surveys of the interior and exterior of both properties on several occasions using both an Exploranium-135 and Ludlum 2221 detectors. With the exception of an office area and storage space at 9540 Niagara Falls Boulevard that was constructed after the original building directly on top of the asphalt parking lot, interior radiation levels were relatively low. The highest reading in the newer area was 115 µR/hr (microroentgen per hour); elsewhere throughout the building, radiation levels generally ranged between 10 and 20 µR/hr. Exterior readings taken at waist height generally ranged between 10 and 350 µR/hr, while the maximum reading of 600 µR/hr was recorded on contact (i.e., at the ground surface). At a fenced area behind the building located at 9540 Niagara Falls Boulevard, waist-high readings ranged between 200 and 450 µR/hr, and on-contact readings ranged between 450 and 750 µR/hr. Elevated readings were also observed on the swath of grass between the 9524 Niagara Falls Boulevard property and the adjacent property to the west that contains a hotel, and in the marshy area beyond the parking lot behind the buildings. Two biased samples of slag were collected from locations that exhibited elevated static Ludlum detector readings: one sample was collected from an area of loose blacktop that indicated readings of 515,905 cpm (counts per minute) on the Ludlum detector, and one slag sample was collected in the marshy area that indicated readings of 728,235 cpm on the Ludlum detector.

During a reconnaissance performed by the New York State Department of Health (NYSDOH) and NYSDEC on July 9, 2013, screening activities showed radiation levels at 200 µR/hr with a hand-held Pressurized Ionization Chamber (PIC) unit around an area of broken asphalt and 500 µR/hr from a soil pile containing slag at the NFB Site. Readings over 600,000 cpm were recorded with a sodium iodide 2x2 scintillation detector from the soil and slag pile.

The NFB Site was referred to the EPA by the NYSDEC and NYSDOH on July 21, 2013. No other removal actions have been taken by other government or private parties prior to this request.

On September 10, 2013, EPA's Technical Support Contractor, WESTON Solutions, Inc. Removal Support Team (RST) conducted a gamma radiation screening of the 9524 Niagara Falls Boulevard property using a Ludlum 2221 Scaler Ratemeter. On December 4–5, 2013, further radiological survey information was obtained from the 9524 and 9540 Niagara Falls Boulevard properties, as well as the church property located further east of the two site parcels. The highest gamma radiation screening results were recorded from the exposed soil area in the rear, northern portion of the 9540 Niagara Falls Boulevard property.

On December 5–7, 2013, RST documented the areas of observed contamination at the NFB Site. The areas of observed contamination were delineated by measuring the gamma radiation exposure rates, and determining where the gamma radiation exposure rate around the source equals or exceeds two times the gamma radiation at site-specific background rates. The areas of observed contamination are defined by site-attributable gamma radiation exposure rates, as measured by a survey instrument held 1 meter above the ground surface, which equal or exceed two times the site-specific background gamma radiation exposure rate. At the NFB Site, an area of approximately 168,832 ft^2 was found to have gamma radiation levels which exceed two times the background measurement of 8,391 cpm. PIC data were also collected at several points to confirm the boundary.

On December 11, 2013, RST collected a total of 16 soil samples (including one environmental duplicate sample) and three slag samples from fifteen boreholes advanced throughout the NFB Site and the First Assembly Church property located directly adjacent to the east/northeast of the site property, using hollow-stem auger drilling methods. The two soil samples collected on the First Assembly Church property are to document background conditions. At each sample location, soil samples were collected directly beneath slag; at locations where slag was not present, the soil sample was collected at the equivalent depth interval.

The soil samples were analyzed for metals by inductively coupled plasma (ICP) technique and mercury by manual cold vapor technique in accordance with SW-846 Method 6010C and 7471B, respectively. In addition, soil and slag samples were analyzed for isotopic thorium and isotopic uranium by alpha spectrometry according to DOE method A-01-R, and radium-226 and radium-228 by gamma spectrometry according to DOE Method GA-01-R. Analytical results indicate concentrations of radionuclides found in the slag and soil to be significantly higher than at background conditions (i.e., greater than 2x background concentrations).

On April 28, 2014, RST personnel collected radon and thoron concentration measurements from locations on and in the vicinity of the NFB Site. At the selected locations in background areas, above the source material, and off the source area, radon and thoron concentration measurements in pCi/L were collected with RAD7 radon detectors. The radon and thoron measurements were collected at heights of one meter above the ground surface. The measurements included uncertainty values, which were taken into account to calculate adjusted concentrations for evaluation of observed release in the air migration pathway. There were no radon or thoron concentrations that exceeded the site-specific background, nor were there any adjusted concentrations that equaled or exceeded a value two-standard deviations above the mean site-specific background concentration for that radionuclide in that type of sample (i.e., there is no evidence of an observed release to air from site sources).

Based on the Pre-Remedial Evaluation, the site did not meet the minimum criteria necessary to be placed on EPA's "National Priorities List", a list of hazardous waste sites in the U.S. which are eligible for long-term cleanup financed under the federal Superfund program. However, it was subsequently determined that material contaminated with radiation was located beneath the asphalt parking lot shared by the bowling alley and a building supply center. After further site investigation, it was determined that a removal action was warranted (see approved Action Memorandum).

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

For Site activities from July 2015 to August 2017, please reference Pollution Reports #1 through #16.

September 2018 to Present

For this mobilization, the ERRS contractor has been tasked with the removal and disposal of radioactive slag material that has been identified throughout the NFB Site, external to buildings. The material is to be

excavated and stockpiled on-site. ERRS is also to arrange and execute the transport and disposal of this excavated material to a Nuclear Regulatory Commission (NRC) approved facility. Once the material is removed, the area is to be backfilled to grade (with approved off-site material that meets NYSDEC Unrestricted Use Criteria) and restored with either pavement or topsoil depending on current use.

RST is to provide technical support to the project. Daily tasks to include: Scanning the bottom and sidewalls of the excavations with a Ludlum 2241 radiological survey meter (with 3x3 sodium iodide scintillator); collection of post-excavation confirmation samples; analysis of confirmation samples at the on-site laboratory; screening of disposal trucks via Pressurized Ion Chamber; and site documentation.

2.1.2 Response Actions to Date

July 2015 through August 2017

Reference Pollution Report #1 through #16

September 2018 to October 2018

On September 4, 2018, EPA's Emergency and Rapid Response Services (ERRS) Contractor, Guardian Environmental Services, Inc. and RST Contractor mobilized to the Site to reinitiate the removal action. The removal action is to excavate and dispose of radioactive material, external to the on-site structures, that had been identified during the previous assessment activities.

From September 5, 2018 through September 11, 2018, Site preparations activities were conducted by the ERRS Contactor. These activities included mobilizing heavy equipment to the Site (excavators, off-road dump trucks, loaders, etc.), the setup of temporary fencing, the stockpile of 2-inch crusher run (with fines) backfill material, the development of haul roads, the creation of a stockpile pad, and the generation of signage for the Site's traffic control plan. Also during this time, RST Contractor worked closely with EPA's ERT and NARAL members to setup the on-site radiological laboratory and develop site documentation protocols.

Region 2 Public Affairs Division (PAD) has prepared and finalized a new Fact Sheet for the Site. From September 7 and 11, 2018, a PAD official conducted a door to door distribution of the Fact Sheet to surrounding businesses and residences including adjacent trailer parks and the nearby elementary school. Media interest in the Site has been relatively low. However, there have been a number of concerned citizens that have reached out to the two on-site businesses and the OSC with questions and concerns. These inquiries are being address on an individual basis by the OSC.

From September 12, 2018 through September 28, 2018, work at Excavation Area (EA) 1, EA 2, and EA 4 had been initiated and completed. The removed material was stockpiled at the designated staging area for the scheduled loadout. After confirmation samples were collected and the areas were scanned clean utilizing Ludlum 2241 with 3x3 sodium iodide scintillator, the areas were then backfilled with crusher-run gravel (in 6-inch lifts) and compacted to a 95% rating. Total amount of material excavated to date is approximately 5,080 cubic yards.

From October 1, 2018 through October 5, 2018, work at EA 3 had been initiated and in progress. Working from south to north, the material was excavated and stockpiled. Confirmation scanning, sampling, and backfill operations are being conducted concurrently.

From October 8, through October 12, 2018, EA 3 had been completed and EA 7 and EA 8 had been initiated and completed. The material was excavated and stockpiled. Confirmation scanning, sampling, and backfill operations are being conducted concurrently.

Subsequent scans of EA 5, EA 8, and EA 9 determined that the footprint of contamination is much smaller than originally anticipated. As a result, EA 5 has been eliminated from excavation and the excavation extent of EA 8 and EA 9 has been reduced.

From October 15, 2018 through October 29, 2018, EA 6 and portions of EA 9 and EA 10 were initiated and completed. The remaining portions of EA 9, EA 10, EA 11, and EA 12 will be addressed during a later mobilization. Paving operations for this mobilization were also completed and included the base layer for EA 1, EA 2, EA 3, EA 4, EA 6, EA 7, EA 10, and EA 11. The finish layer was applied to EA 6, and the milled area adjacent to the building supply center. To prevent winter plowing operations to encroach on the remaining excavation areas, temporary panel fencing was erected along the excavation boundary. EPA contractors, ERRS and RST, have demobilized equipment and personnel from the Site. It is anticipated that EPA will return in Spring 2019 to complete work on the remaining portions of EA 9, EA 10, EA 11, and EA 12.

The shipping of waste to the US Ecology disposal facility in Belleville, Michigan, a facility compliant with EPA Offsite Rule, was completed on September 24, 2018. The stockpile that had been created in EA 11 has been depleted. Approximately 12,704 tons of material has been shipped offsite during this mobilization.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

PRPs are being investigated by USEPA Enforcement Team.

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2.2 Planning Section

2.2.1 Anticipated Activities

Remobilization of EPA personnel and contractors to the Site in the Spring 2019 to complete the external and internal to structure work.

USEPA has been coordinating with NYS, Niagara County, and local representatives throughout the

assessment/removal process.

2.2.1.1 Planned Response Activities

- Prepare new action memorandum for additional funding to address remaining work at the site, both internal and external to structures.
- Work with project Risk Assessor and Health Physicist to evaluate possible solutions to address internal to structure contamination.

2.2.1.2 Next Steps

Updated timelines
Update excavation estimates and removal costs.

2.2.2 Issues

Though funding has been allocated for the designated ceiling amount in accordance to the action memorandum, the disposal and restoration costs for the entire project (including internal to structure) are projected to exceed the allocated funding. Priority areas have been identified and alternative solutions are being developed.

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

2.4.1 Narrative

On May 13, 2016, ERRD Director authorized verbal funding in the amount of $500,000.00 in mitigation funding and $100,000.00 in RST contractor funding for a total project ceiling of $600,000.00 to initiate an emergency Comprehensive Environmental Response Compensation and Liability Act (CERCLA) removal action at the Niagara Falls Boulevard Site.

On July 14, 2016, the ERRD Deputy Director verbally authorized $500,000 in mitigation funding for a total project ceiling of $1,100,000.00 to continue the CERCLA removal action at the Niagara Falls Boulevard Site.

On September 28, 2016, the Niagara Falls Boulevard Site Action Memo was signed by USEPA Headquarters.
On September 29, 2016, an additional $950,000.00 was authorized in mitigation funding to Task Order 23 with Guardian Environmental Solutions.

On October 22, 2016, OSC Daly transferred $200,000.00 from extramural cost (Original Total $707,000.00) to the RST2 costs. The new total budgeted ceiling for RST2 is $518,000.00. Remaining extramural cost is $507,000.00.

On January 09, 2017, $435,000.00 was authorized in mitigation funding to bring the total mitigation ceiling to $2,385,000.00.

On May 03, 2017, $215,000.00 was authorized in mitigation funding to bring the total mitigation ceiling to $2,600,000.00

On June 29, 2017, an additional $50,000.00 was requested in mitigation funding to Task Order 23 with Guardian Environmental Solutions. The new Task Order ceiling will be $2,650,000 once authorized.

On July 15, 2017, OSC Daly transferred $100,000.00 from extramural cost (Original Total $707,000.00) to the RST2 costs. The new total budgeted ceiling for RST2 is $618,000.00. Remaining extramural cost is $407,000.00.

On July 17, 2017, an additional $50,000.00 was authorized and added to mitigation funding for Task Order 23 with Guardian Environmental Solutions. The new Task Order ceiling is $2,650,000 once authorized.

On January 19, 2018, an additional $1,000,000.00 was requested in mitigation funding to Task Order 23 with Guardian Environmental Solutions. The new Task Order ceiling will be $4,167,639.69 once authorized.

On July 12, 2018, an additional $1,000,000.00 was requested in mitigation funding to Task Order 23 with Guardian Environmental Solutions. The new Task Order ceiling will be $5,167,639.69 once authorized.

On August 14, 2018, an additional $2,000,000.00 was requested in mitigation funding to Task Order 23 with Guardian Environmental Solutions. The new Task Order ceiling will be $7,167,639.69 once authorized.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor	$7,167,639.69	$6,684,640.58	$482,999.11	6.74%
TAT/START	$605,360.31	$580,840.96	$24,519.35	4.05%

Intramural Costs				
Total Site Costs	$7,773,000.00	$7,265,481.54	$507,518.46	6.53%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

2.5 Other Command Staff

2.5.1 Safety Officer
GES Health and Safety Officer worked with HP Lyndsey Nguyen and OSC Daly to improve existing HASP and site activities.

2.5.2 Liaison Officer

2.5.3 Information Officer

Mike Basile is the lead USEPA Public Affairs Official. Mr. Basile distributed the NFB Site Fact sheet to local officials, neighboring businesses, schools and communities between September 7 and 11, 2018.

3. Participating Entities

3.1 Unified Command

3.2 Cooperating Agencies
NYS DEC
NYS DOH
Niagara County DOH

4. Personnel On Site

EPA Region 2 OSC	1
EPA ERRS Contractor	7
EPA RST 3 Contractor	2

As of October 29, 2018, all site personnel have been demobilized. Remobilization is anticipated in the Spring 2019.

5. Definition of Terms
No information available at this time.

6. Additional sources of information

7. Situational Reference Materials
No information available at this time.